



ComCom's Annual Report  
**2008**



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

**Swiss Federal  
Communications Commission  
ComCom**

## The most important activities at a glance

### Access procedures

Full unbundling and co-location

The price for leasing the subscriber line by providers is set at CHF 18.18 for 2008. The prices for installations in Swisscom exchanges are also being greatly reduced.

Cost-based interconnection prices (LRIC)

ComCom reduced most interconnection prices for 2007 and 2008 by 25 to 30%.

Subscriber line billing

ComCom has increased the discount which Swisscom must allow its competitors for subscriber line billing.

### Licences

Universal service

The universal service will also be fully guaranteed nation-wide in 2008 in accordance with the provisions of the law.

GSM

ComCom has provisionally extended the Swisscom, Sunrise and Orange licences which expired at the end of May 2008.

UMTS

In 2008, OFCOM published the result of a consultation which resulted in no immediate need for action.

Mobile radio frequencies

ComCom has initiated an overview of the future allocation and utilisation of all mobile radio frequencies from 2014 onward.

### Number porting

Telephone number porting when switching operator is working well in mobile telephony and in the fixed network. The wholesale price for porting a fixed-network number was reduced to CHF 13.12 for 2008.

### Carrier Selection

The measures decided in 2007 for better protection of consumers from unwanted changes to preselection are having an effect.

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## Preface

In order to create a level playing field for all providers of telecommunications services, one of the key tasks of any telecom regulatory authority is to determine prices for interconnection and the last mile. This task was indeed one of the key areas of ComCom's activity in the past year.

For 2007 and 2008 we determined prices for interconnection and for the use of the ominous last mile. These prices are legally binding, because fortunately no objections were raised to them. Thus it seems that a middle way has been found, which most importantly and at long last ensures that legal certainty exists – so that all players can now draw up business plans for their broadband offerings.

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If we had had ex-ante regulation in Switzerland as is the case everywhere else in Europe, this certainty with regard to the law and planning would have been established much earlier. Unfortunately, the prices for bitstream access, which are important precisely for broadband competition in rural areas, are still pending because of an appeal by Swisscom – which has now been rejected.

ComCom's decisions on prices stimulated competition in the broadband sector and, retroactively, established a somewhat greater degree of fairness in the telecoms market.

However, almost of greater importance is the shaping of the future telecommunications infrastructures. This is why ComCom took the initiative, at a round-table discussion, of coordinating the expansion of a fibre-optic network to

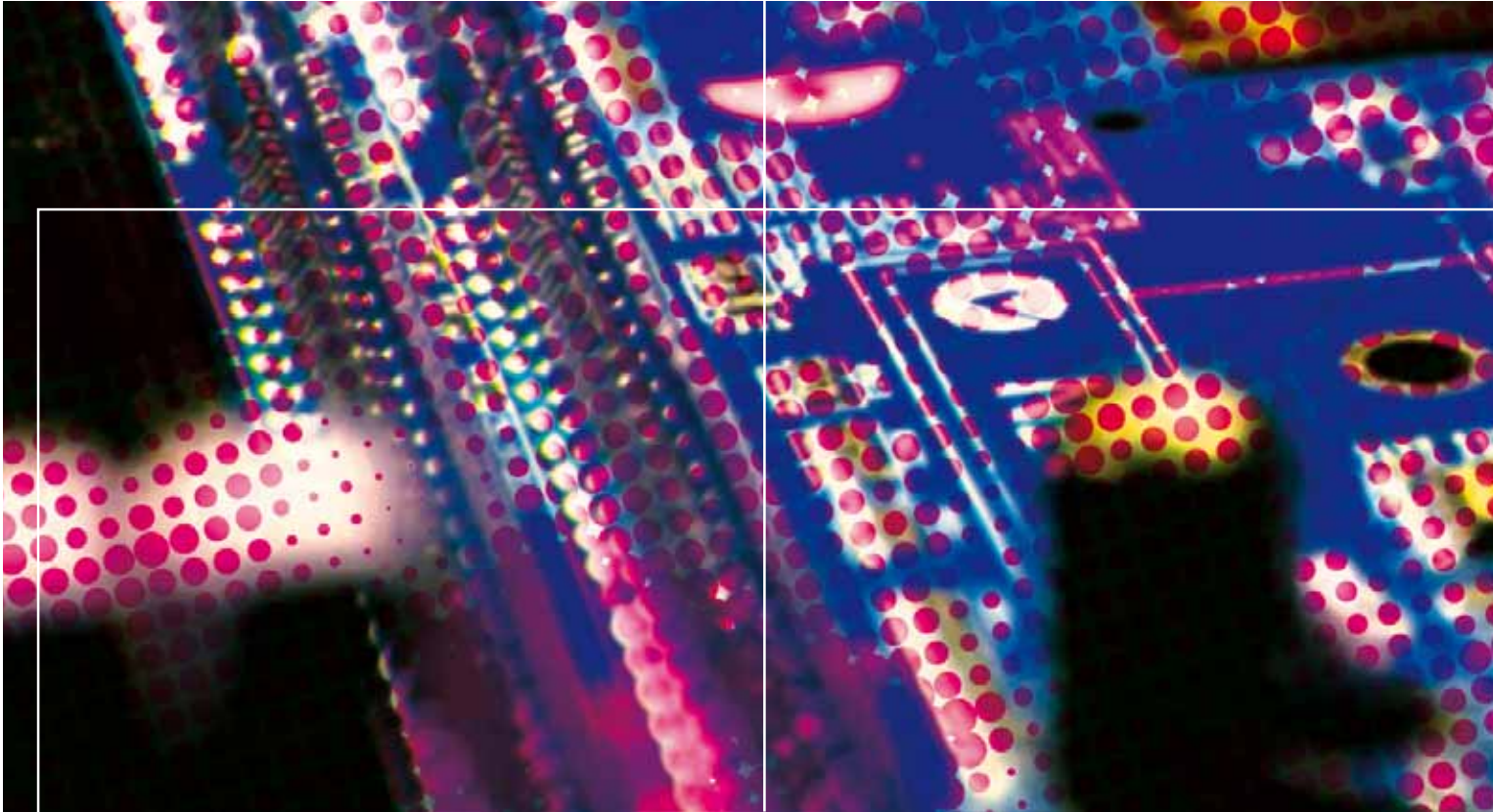
households (Fibre to the Home – FTTH) with the CEOs of the leading electricity companies, telecommunications companies and cable operators. The goal was and still is to ensure that all service providers enjoy fair, non-discriminatory access to the fibre-optic network. At the same time, the physical construction of the network must take place in a coordinated manner, avoiding unnecessary costs and using standardised technology.

This round table has got off to a good start. ComCom is pursuing its role as a facilitator which promotes developments in the telecoms market. Also in the future we will fulfil a dual role – in the interests of the Swiss national economy: arbitrator and moderator, who helps defining the future of telecommunications in conjunction with the industry.



Marc Furrer, President  
May 2009





## Summary and outlook

In telecommunications, 2008 was not a crisis year but a year which provided some very clear pointers to the future.

Optical-fibre is the fixed-network technology of the future. Modernisation of the old, copper-wire access network with optical fibre gained great momentum in 2008. A whole series of urban electricity companies presented their plans for bringing a fibre-optic network to homes in 2008. In particular, in the race towards the fixed network of the future, the progress in construction by the Zurich city electricity supply company caused Swisscom to also address expansion of its network. In 2008, "Fibre to the Home" (FTTH) was also the number one topic in telecommunications, not only in the media but also in the world of politics.

In this context, it quickly became apparent to ComCom that there was a need for discussion and coordination within the industry. ComCom therefore established an "FTTH round table" as a discussion platform for the industry and organised the event twice in 2008. At the technical level, efforts must be made to achieve standardisation of installations inside buildings and coordinated network construction. Of fundamental importance is also that the competition which has been achieved should not be restricted by such a new, high-

speed network and that customers should retain the right of carrier selection.

In this context, it was almost forgotten that in 2008 unbundling made an extremely promising start – up from almost zero to more than 56,000 connections by March 2009.

The investment in unbundling by a number of companies is leading to a satisfying increase in competition.

From the consumers' viewpoint, 2008 was therefore a gratifying year in telecommunications: new, cheaper offerings resulting from the birth of unbundling and overall prices which were falling slightly, had an inflation-damping effect. Furthermore, the population is guaranteed a high-quality, reasonably-priced basic offering of telecommunications services everywhere in Switzerland.

Given the continuing increased consumption of telecommunication services, in terms of expenditure Switzerland remained in the lead in Europe with an annual telecommunications expenditure per head of around CHF 1400; the EU15 average is almost a quarter lower than this.

Despite turbulent economic times, the telecommunications industry was generally well placed at the end of 2008. Though total sales in the sector were slightly down due to



falling prices, investment and the number of employees remained stable, according to estimates.

In 2008 the looming economic crisis clearly had not yet had a significant effect on the telecommunications sector. It is to be hoped that telecommunications will continue to prove to be a comparatively robust sector.

### **Essential revision of the Telecommunications Act**

The discussions on connecting up buildings to fibre-optic networks were accompanied by a call for regulation. However, the current legal situation is clear in this regard: the Telecommunications Act (TCA) is not formulated in a technologically neutral way, but provides for intervention in markets solely in six explicitly listed variants of network access (cf. the section on “Activities”). On the basis of today’s TCA, in the case of fibre-optic networks it is therefore impossible for ComCom to intervene when markets fail or in order to protect consumers.

It is ComCom’s view that it is currently too early to decide on the necessity of regulatory market intervention, though in general the regulatory instruments should be sufficiently flexible so as to be able to react to future challenges in good time without changes to the legislation.

Together with the price monitor and the Competition Commission, in August 2008 ComCom proposed a selective revision of the TCA to the Federal Council: in future, ComCom should be able to act not only on the basis of a complaint from a telecommunications service provider but now also on its own initiative, if there are grounds for assuming that access conditions are not in conformity with the law (non-discriminatory and cost-based).

This matter was brought before parliament by Erika Forster-Vannini, a member of the Council of States, in the form of a motion. The proposal was received positively by both the Federal Council and the Council of States.

ComCom expressed its clear support for the introduction of technologically-neutral and flexible “ex-ante” regulation. Within the framework of a forthcoming revision of the TCA, consideration should also be given to whether a differentiated regulatory framework – similar to the “regulatory tool-box” in EU law – should be introduced.

The current model which features ex-post regulation has various weaknesses: ComCom cannot take action independently, but only at the request of a provider. When a provider is effectively involved in a procedure, prices or access conditions can only be fixed retroactively, which may lead



to undesirable uncertainties in the market and stifled investment. On the other hand, the flexibility which is essential in a very dynamic technological environment is lacking. At present, the TCA defines precisely the six cases in which intervention in the market is permissible – and changes are possible only by means of protracted amendments to the legislation.

**Ex-ante-regulation** would enable intervention at an earlier stage – when market dominance of a provider is proven – and ensures equal access conditions and prices for all providers from the outset. With its quicker procedures, ex-ante regulation leads to greater legal and investment security, which benefits technological development and Switzerland as a business location.

**Technology neutrality** is a core element of a future-proof, open regulatory environment. Only a technologically-neutral formulation of the law would guarantee that flexible and timely intervention is possible if new monopolies or bottlenecks threaten competition when new technologies are introduced.

## Outlook

The most important guideline for ComCom's activity is the defining clause in the Telecommunications Act which states that the purpose of the TCA "is to ensure that a range of cost-effective, high quality, and nationally and internationally competitive telecommunications services is available to private individuals and the business community." This is to be achieved in particular by means of a reliable, affordable universal service throughout Switzerland and by effective competition.

Through its decisions, ComCom seeks to promote sustainable competition between providers and the efficient utilisation of the frequency spectrum. In the interest of consumers, it continues to strive to stimulate an investment-friendly environment and technological innovation in the telecommunications market.

The following are ComCom's major activities in 2009:

- **Access procedures:** The pending procedures concerning access conditions and prices for leased lines and cable ducts must be concluded as rapidly as possible.
- **Award of licences:** In 2009, ComCom is focusing on the preparation of the coordinated re-allocation of the

mobile radio frequencies which will become free at the end of 2013 and 2016 respectively. Among other things, a public consultation is being carried out on this topic.

- **FTTH round table:** If the industry so wishes, ComCom will also continue with the round table process concerning the deployment of FTTH networks.
- **Internationally:** Together with OFCOM, ComCom will host a plenary session of the European Regulators' Group (ERG) and the Independent Regulators' Group (IRG) in Lucerne from 7–9 October 2009.

## Developments in the mobile radio market

In Switzerland, mobile telephone coverage is almost complete – telephone calls can be made even throughout Alpine regions. GSM mobile telephony coverage in Switzerland is nearly 100% of the population and 90% of the national surface area.

Although there have been more mobile terminals than inhabitants in Switzerland since 2007, growth in customer numbers also continued unchecked in 2008.

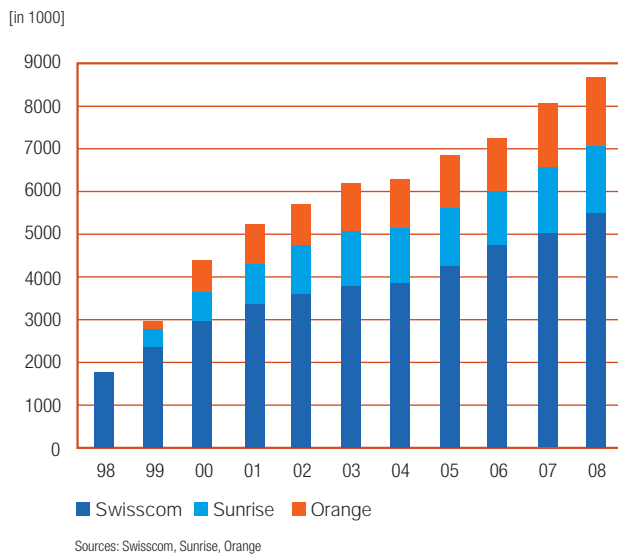
Today many users have more than one mobile device with a mobile radio connection – e.g. notebook or smartphone for work – in addition to their mobile phone. However, in European terms, the penetration rate of about 114,5% at the end of 2008 merely positions Switzerland one place below the average.

Customer numbers for all three national GSM providers increased (cf. figure 1). Swisscom managed to win more than 60% of new customers, keeping its market share steady at 61,8%. In the EU, the average market share of the market leader is only 38,3%.

The take-over of the Swiss provider Tele2 by Sunrise in the autumn of 2008 was a striking event in both the mobile market and the fixed network market. In the mobile radio market, Sunrise itself was able to achieve strong customer growth in 2008. Together with the customers taken over from Tele2, in 2008 Sunrise gained a total of 246,000 extra mobile customers and its market share rose from 18,8% to 20,4%. In 2008, Orange gained only 33,000 new customers; its market share fell as a result from 18,6% to 17,8%.



**Fig. 1: Mobile phone connections in Switzerland**



### Prices continue to fall

Despite a trend of falling prices, in mobile telephony Switzerland remains an island of high prices in comparison with many European countries. The mobile termination charges which the Swiss providers have agreed among themselves are among the highest in Europe.

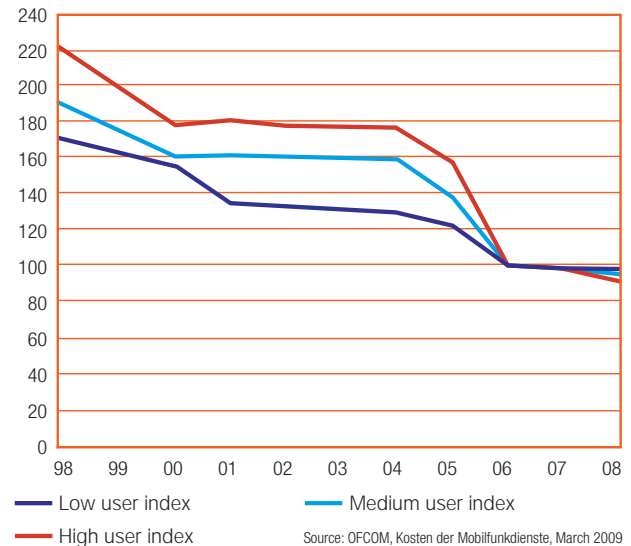
Since liberalisation of the market in 1998, however, two phases were observed in which end-user prices in mobile telephony fell (cf. figure 2): Firstly, prices fell markedly from 1998 to 2001 with the entry into the market of the network operators diAx (now Sunrise) and Orange.

Following a period of price stability, reductions in mobile termination charges and new market entrants (Tele2, Yallo) and partnerships between operators and resellers of mobile radio services (Migros, Coop, Cablecom, Mobilezone) in 2005 and 2006 led to greater competition and real reductions in prices.

An OFCOM study on the evolution of prices in mobile telephony shows that all mobile customers – especially frequent users – also benefited in part from considerably lower prices in 2008. The consumer baskets calculated by OFCOM in summer 2008 vary greatly depending on the provider. Swisscom's prices are among the highest for all usage profiles. The lowest included Orange, Aldi and Yallo, for prepaid offerings, and Sunrise for postpaid contracts.

As the only Swiss network operator, for making calls abroad Swisscom offers its customers the prices which are prescribed in the EU for international roaming. Sunrise and Orange achieve the 2008 EU price level only if an extra option is activated.

**Fig. 2: Development of end-user prices on the Swiss mobile market** (index of costs according to user profile, 100 = 2006)



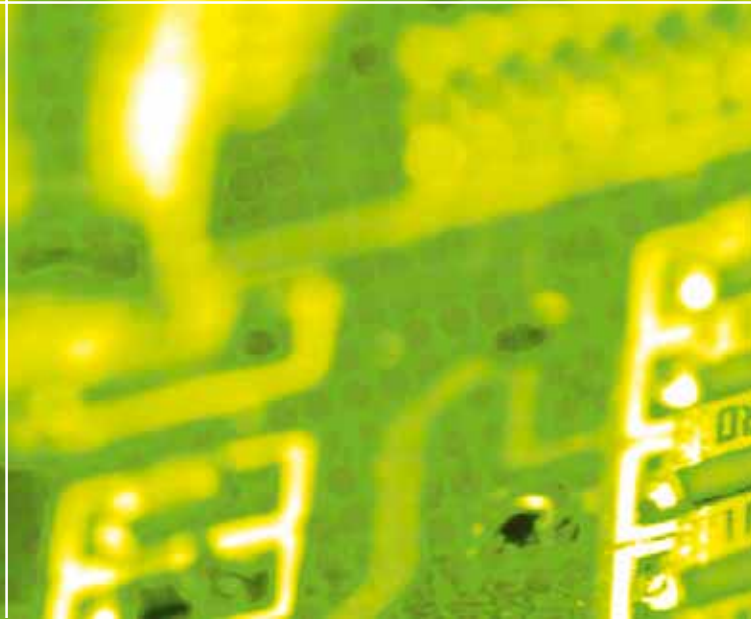
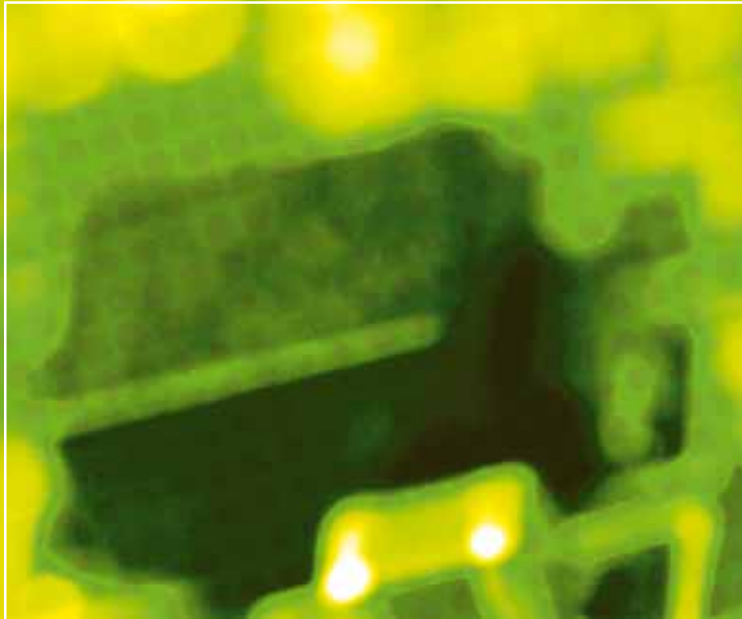
In 2008, the total turnover due to mobile radio services of the three operators Orange, Sunrise and Swisscom was just over CHF 5,7 billion, a slight increase on the previous year (+1,4%).

In this context a distinction must be drawn: sales of mobile radio services to private individuals stagnated or even fell back slightly in 2008. Thus the monthly sales per user (ARPU) for all three mobile radio operators continue to fall and are now between CHF 52 and CHF 60. In 2007, the EU average was CHF 35.50 per month. However, Swisscom was able to register a handsome growth in sales of 10–11% for mobile radio services for SMEs and large businesses.

### Mobile internet takes off

Population coverage for UMTS services is in Switzerland between 60% and 92%, depending on the provider. About 60% of the surface area of the country now has UMTS coverage.

In the last few years all three operators have invested in the UMTS expansion HSDPA, laying the foundations for mobile surfing at transmission speeds of 1.8 Mbit/s or even



3.6 Mbit/s as part of the broadband experience. Both Swisscom, with the largest UMTS coverage, and Orange and Sunrise have already equipped large parts of their network with HSDPA. HSDPA is therefore available in most medium-sized and all large Swiss towns and cities.

Thanks to a combination of second and third generation mobile telephone technologies, operators can offer mobile internet access almost everywhere. To enable these opportunities to be exploited, attractive devices have been included in product offerings: mobile mini-notebooks, the trend-setting iPhone and other versatile smartphones with large, high-quality displays.

The trend towards the mobile office and consumption of information and entertainment on the move led to a large increase in data traffic in 2008 (in contrast with falling revenues from voice services and basic charges). Swisscom, for example, revealed growth in sales of mobile data services of 32%; a total of CHF 277 million.

And the next mobile radio technology, LTE (Long Term Evolution of UMTS), is already at the gates; for relatively low network costs, it promises considerably better network efficiency than HSDPA. LTE enables much faster broadband data transmission (up to 100 Mbit/s on the downlink and 50 Mbit/s on the uplink).

### Telephony in the fixed network

Opening up the market for fixed-network telephony has also paid off for consumers: costs for calls in the fixed network fell dramatically, especially in an initial phase up to 2002 (by 40 to 60%, depending on usage behaviour). Since then, customer's telephone costs have fallen continuously, but only moderately. In 2008, frequent callers above all benefited from falling prices. These reductions in prices are mainly attributable to the cheaper calls from the fixed network to the national mobile telephone networks.

An OFCOM study on fixed-network telephony costs comes to the conclusion that between 2007 and 2008 there were no significant price reductions for calls within the fixed network or for international calls.

One exception is bundled offerings which include free calls on the fixed network. According to the OFCOM study, the fixed-network offerings of most providers are in the final analysis very similar for end users. Only Cablecom is markedly cheaper, with lower connection charges and a flat rate for fixed-network telephony.

Quite unlike the mobile telephony situation, it has to be stated that fixed-network tariffs in Switzerland – measured using the OECD consumer baskets for telephony – are at

the average European level. Charges for international calls are very competitive internationally; they are well below the European average.

ComCom has also greatly reduced the interconnection prices paid between providers for the years 2007 and 2008. These charges for using a competitor's network are now among the lowest in Europe. This should encourage competition, either via lower prices or investment in new offerings.

Swisscom's market share is also high in fixed-network telephony, at about 71% of calls. Another 20% or so of customers make calls via a Swisscom connection, but the calls are always routed via a different provider using preselection codes.

As the largest rival in the fixed network, Sunrise took a great step forward as a result of its take-over of Tele2. Its half-million existing customers are joined by 230,000 former Tele2 fixed-network customers, giving it a market share of 19%.

In 2008, Cablecom was able to win considerably fewer new customers (21,000) than in the previous year. Cablecom has 309,000 telephone customers, representing a market share of 7,7%. The other cable network operators offering digital telephony combined account for about one percent of tele-

phone connections. A further 1,2% of customers make their telephone calls with small telecommunications providers.

Furthermore, voice telephony based on the internet protocol (VoIP) continues to boom, particularly with business customers. However, this development cannot be measured accurately, in particular for calls from PC to PC over the internet, which are excluded from the statistics. According to these, there were 365,000 VoIP connections in Switzerland in 2007. In the longer term, this technology undoubtedly represents the future, as the future telecommunications networks will be IP-based.

It is often said that customers in Switzerland are not price-sensitive. It is certainly true that customers, when asked if they would like to switch their provider, are not influenced by price considerations alone. In this fundamental choice, other factors over and above prices play a role, such as the presumed quality of the product, customer service, a company's reputation and experience in the social environment, etc. Additionally, many people are also simply satisfied with the good performance of their provider.

However, price does play a role concerning usage of means of communication: longer calls are made much more frequently using a fixed-network telephone and hence at a lower price.

At three and a half minutes on average, the duration of calls on the fixed network is almost twice as long as mobile calls. Expensive calls, such as those from the fixed network to a mobile network or from one mobile network to another, are relatively few and short.

In total, telephone traffic in Switzerland from 1999 to 2007 increased by more than a billion minutes – so overall customers are using the telephone much more than before liberalisation (25,7 billion minutes).

Despite a major switch of telephone traffic to mobile telephony, people continue to use the fixed network to make more calls. Although there are more than twice as many mobiles (8,7 million) as fixed-network connections (3,6 million), in 2007 some 52% of calls and approximately 68% of telephone minutes were made on the fixed-network.

With a broadband internet access penetration rate of nearly 33% via either ADSL or the cable network in mid-2008, Switzerland was ranked fourth among the OECD countries, just behind Denmark (36,7%), the Netherlands (35,5%) and Norway (33,4%). The average for the OECD countries is 21,3% and the figure for the EU countries is 21,7% (cf. figure 3).

### DSL versus CATV: competition on infrastructures?

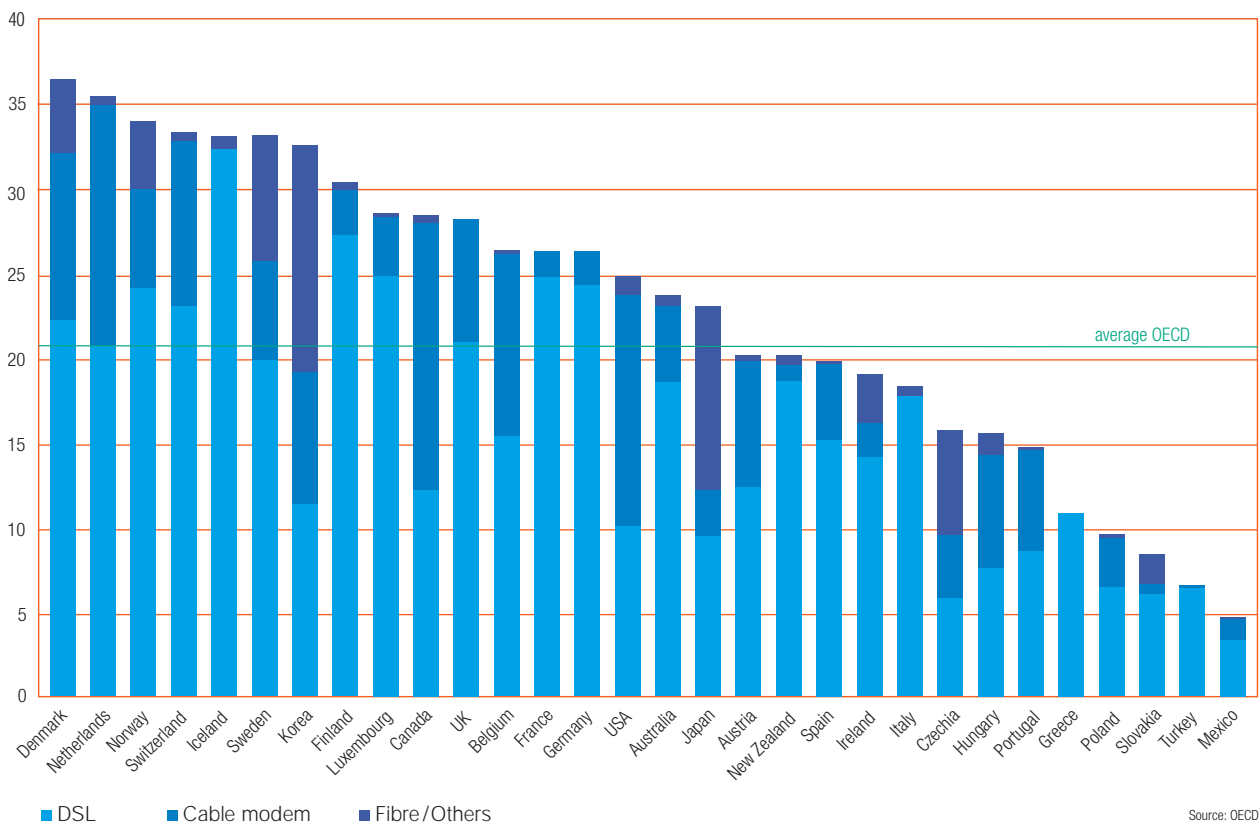
From the viewpoint of the access technologies employed, xDSL access via a telephone line is still growing distinctly more rapidly than internet access via cable TV. Market shares were 70,5% for xDSL (1,787,000 connections) and 29,5% for cable (746,000 connection; cf. figure 4) at the end of 2008.

## Development of the broadband market

The broadband market in Switzerland continues to grow, though the rate of growth is down slightly on recent years.

Fig. 3: OECD broadband penetration, June 2008

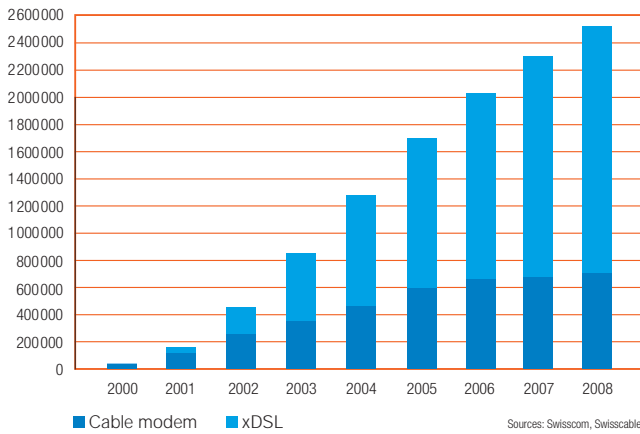
(as % of population)



Source: OECD

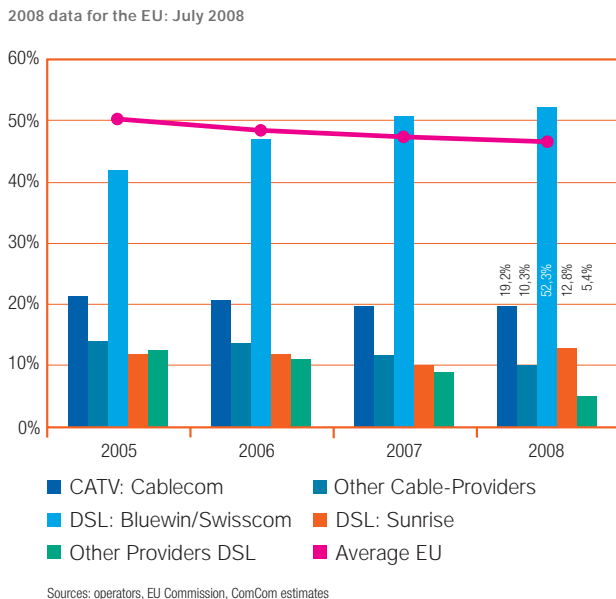


**Fig. 4: Split of the broadband market in Switzerland, December 2008**



If one looks at the entirety of the players on the broadband market in Switzerland, Swisscom's market share (52,3%) is not only over two and a half times that of Cablecom (approximately 19,2%), but more significantly it has continued to grow year on year, whilst that of the other competitors is stagnating or falling (cf. figure 5).

**Fig. 5: Market shares of broadband connections in Switzerland and in the EU, December 2008**



The most important thing to note is the comparison between the trend observed in Switzerland, where Swisscom, as the historic operator, continues to win market shares from its competitors, whilst the trend in the European Union is the exact reverse, where the average market share of the historic

operators has been falling in the last years. It seems undeniable that unbundling at an earlier stage, along with the diversity of unbundled offerings (note the absence of bit-stream offerings in Switzerland), has enabled alternative operators to gain a sustainable foothold in the high-speed market in Europe.

**Start of unbundling in Switzerland**

The ongoing roll-out of several commercial unbundled offerings in Switzerland has to be welcomed. After a slow start in 2007, the number of fully unbundled lines has increased considerably over the last 12 months reaching a total of 30,256 at the end of 2008. According to Swisscom, at the end of 2008 there were 597 sites with the equipment of a third-party operator in telephone exchanges, compared with 262 at the start of the year.

Several alternative operators are currently investing in unbundling (Sunrise, VTX, Colt...), either targeting business customers or with a view to proposing new service offerings to private customers.

However, it must be noted that the majority of unbundled lines are with Sunrise, which claimed approximately 28,000 unbundled lines as of the end of 2008. Also in this area Sunrise continues to be Swisscom's main competitor in the market; Sunrise even announced at the start of 2009 that it wanted to speed up expansion of its last-mile infrastructure, thereby making unbundled services available to 80% of the population by the end of this year – a year earlier than expected.

This situation is remarkable in terms of the rate of roll-out. In international terms, most European countries needed 2 to 3 years to reach such a level. However, it must be borne in mind that the first unbundled lines in Europe in 2000 and 2001 were provided initially on an experimental basis, before tackling the commercialisation phase as such – unbundling did not get going in Europe until 2002, and actually only took off from 2004 and 2005.

The revised TCA (Telecommunications Act) and the ordinances governing its implementation entered into force on 1 April 2007. Swisscom published its basic offering in March 2007, but only in those sectors in which it considered itself

to be dominant in the market and at prices which were hotly contested by competing operators. In its decision of 24 September 2008, ComCom for the first time set the price for unbundling the last mile, at CHF 18.18 for 2008; it also considerably lowered co-location prices. Swisscom accepted the parameters applied by ComCom as well as the reduction in set prices for the subscriber line.

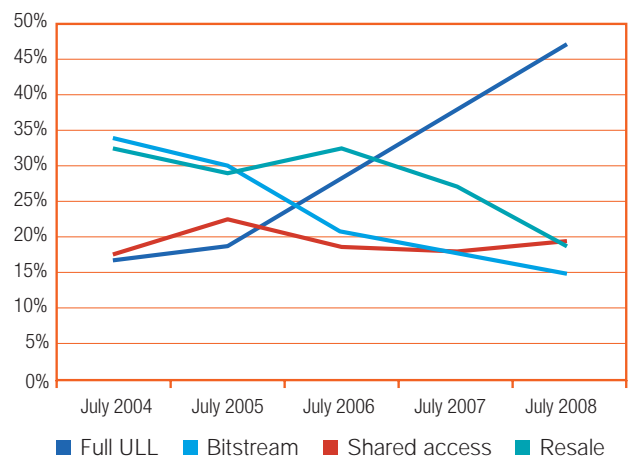
But it is regrettable that Swisscom has opted not to offer bitstream access, as it considered that it was not acting as the dominant provider in this market. Following the decision of the Federal Administrative Court in February 2009, Swisscom will now have to publish a basic offering for bitstream access.

The absence of a bitstream offer to date is all the more detrimental in terms of what happened in the EU at the time unbundling was launched in the early 2000s.

Indeed, apart from a few notable exceptions such as Germany or Finland, where full unbundling offerings took off quickly, in most of the European countries bitstream offerings made it possible in an initial phase for alternative operators to take the first steps towards unbundling before subsequently investing in full unbundling.

Figure 6 shows the growth of fully unbundled lines in the total number of alternative operators' DSL lines, as partial unbundling (bitstream and shared access) diminished.

**Fig. 6: Evolution of unbundling in Europe (EU15), as percentage of alternative operators' total number of DSL lines**



Source: Broadband access in the EU: situation at 1 July, EUROPEAN COMMISSION, 28 November 2008

Unbundling is therefore turning out to be of major strategic importance for alternative operators, who can in this way establish a single direct link with the end user and offer



customised services to their clients. ComCom hopes that, despite the late introduction, unbundling will stimulate competition in the Swiss telecom market.

### **The DSL market in Switzerland: Swisscom still out in the lead...**

The DSL market enjoyed an overall increase of 154,000 customers in Switzerland (or of 185,000 lines including ULL)

between December 2007 and December 2008 – as against +234,000 for the same period a year ago (cf. figure 7).

Although growth is slowing, Swisscom is still reporting the highest increase in customers, with growth of the order of 161,000 in one year. Its market share consequently rose from 72,7% at the end of 2007 to 74,1% at the end of 2008.

### **Local Loop Unbundling**

Unbundling is the process whereby alternative telecommunications service providers gain access to the subscriber connections of the historical operator. The revised TCA, which entered into force April 2007, provides for 2 options:

- **Bitstream access**, where the historic operator makes its xDSL equipment accessible to third-party operators to enable them to provide high-speed services to their customers, independently of the voice telephony service. This option was voluntarily limited to 4 years by parliament in order to encourage progressive investment in full unbundling.
- **Full unbundling** of the local loop, where alternative operators, by installing their own equipment in the telephone exchange, control the entire line to the end user. Unbundling enables providers to define their offerings freely and to achieve an exclusive relationship with customers.

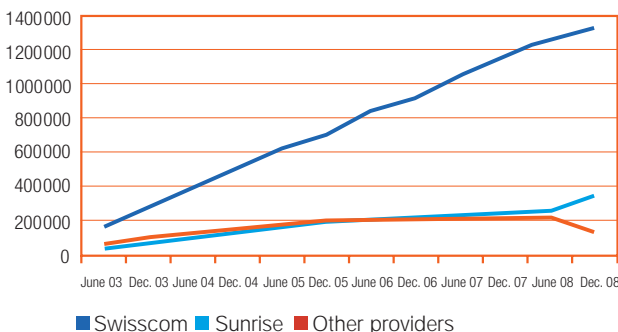
**Co-location** does not correspond to an autonomous form of access. It involves co-use of dominant provider sites enabling alternative providers to set up their own equipment in order to access user connections and offer services directly to the end customer.

2008 was also marked by a restructuring of the DSL market, with the acquisition of Tele2 by Sunrise, which considerably increased its broadband customer base. With 325,000 high-speed customers at the end of 2008, including those acquired from Tele2, and more than 28,000 unbundled customers, Sunrise's market share increased from 14,5% at the end of 2007 to 18,2% at the end of 2008.

The other operators who are resellers of DSL services continue to lose customers and now have 137,000 high-speed connections, the equivalent of a 7,7% market share.

**Fig. 7: xDSL connections in Switzerland**

(including unbundling)



Sources: Swisscom, Sunrise

### Optical fibre: heading for very high speeds

There seems to be broad agreement that the future of the fixed network belongs to optical fibre – the only technology which enables the emergence of new generations of applications and ever more voluminous content, which requires ever greater bandwidth.

Though fibre-optic cables are a long proven transmission medium for high data rates, these networks do not generally extend to private dwellings or small companies. They are used for long distance telecommunications networks, though the final part of the network (the “last mile”) and the supply into residential properties has mainly relied on twisted pair copper wires or coaxial cables.

Switzerland is already in the vanguard in this area, as Swisscom has massively strengthened its network (75% VDSL coverage) by installing a fibre-optic network down to the street cabinets (Fibre to the cabinet, FTTC). Fibre to the home (FFTH) is the final expansion stage of the

fibre-optic network, i.e. fibre-optic cables are laid to private dwellings.

The specific features currently are the number of players involved and the resulting upswing. There are already more than ten urban industrial services (“utilities”) investing in the roll-out of the new network. Also, cable operators are in the process of launching DOCSIS 3.0 on their network to enable them to offer their customers very high speeds. These are all factors which are naturally encouraging Swisscom for its part to invest in the new-generation networks.

It is a question of preventing the emergence of a monopoly which would impede access to other telecommunications service providers and prevent competition. For consumers, it is also essential for them to retain a choice of provider.

ComCom has therefore decided to put in place a discussion platform to tackle the questions of coordination and joint working in the roll-out of fibre-optic networks. On two occasions, in June and then in December 2008, ComCom invited the main players in the market to take part in a round-table discussion devoted to the question of connecting households to fibre-optic networks.

Since the beginning of 2009, two industrial working groups, lead by the Federal Office of Communications (OFCOM), have been drafting technical solutions for the connection of households using fibre optics.

An additional working group will examine the conditions of contracts between property owners and network constructors.





Seated (LTR): Marc Furrer (President), Christian Bovet (Deputy President).  
 Standing (LTR): Stephan Netzle, Reiner Eichenberger, Jean-Pierre Hubaux, Monica Duca Widmer, Andreas Bühlmann (photographer: Ueli Hiltbold).

## The Commission and its Secretariat

The Federal Communications Commission (ComCom) is the Swiss licensing and regulatory authority for the telecommunications sector. The Commission consists of seven independent expert members nominated by the Federal Council.

After the resignations of the two long-serving ComCom members Hans-Rudolf Schurter and Beat Kappeler at the end of 2007, in February 2008 the Federal Council nominated two successors: one of the new members of ComCom is the attorney Stephan Netzle, who is highly experienced in matters of telecommunications and media law. The other new member appointed to ComCom is economist Andreas Bühlmann. As the former vice director of the Federal Banking Commission, he is intimately acquainted with regulatory issues.

In 2008, the Commission met for a total of 11 sessions. The Commission members' commitment in terms of time, including extensive preparations for meetings and decisions taken by way of circulation, amounts to some 20 days a year.

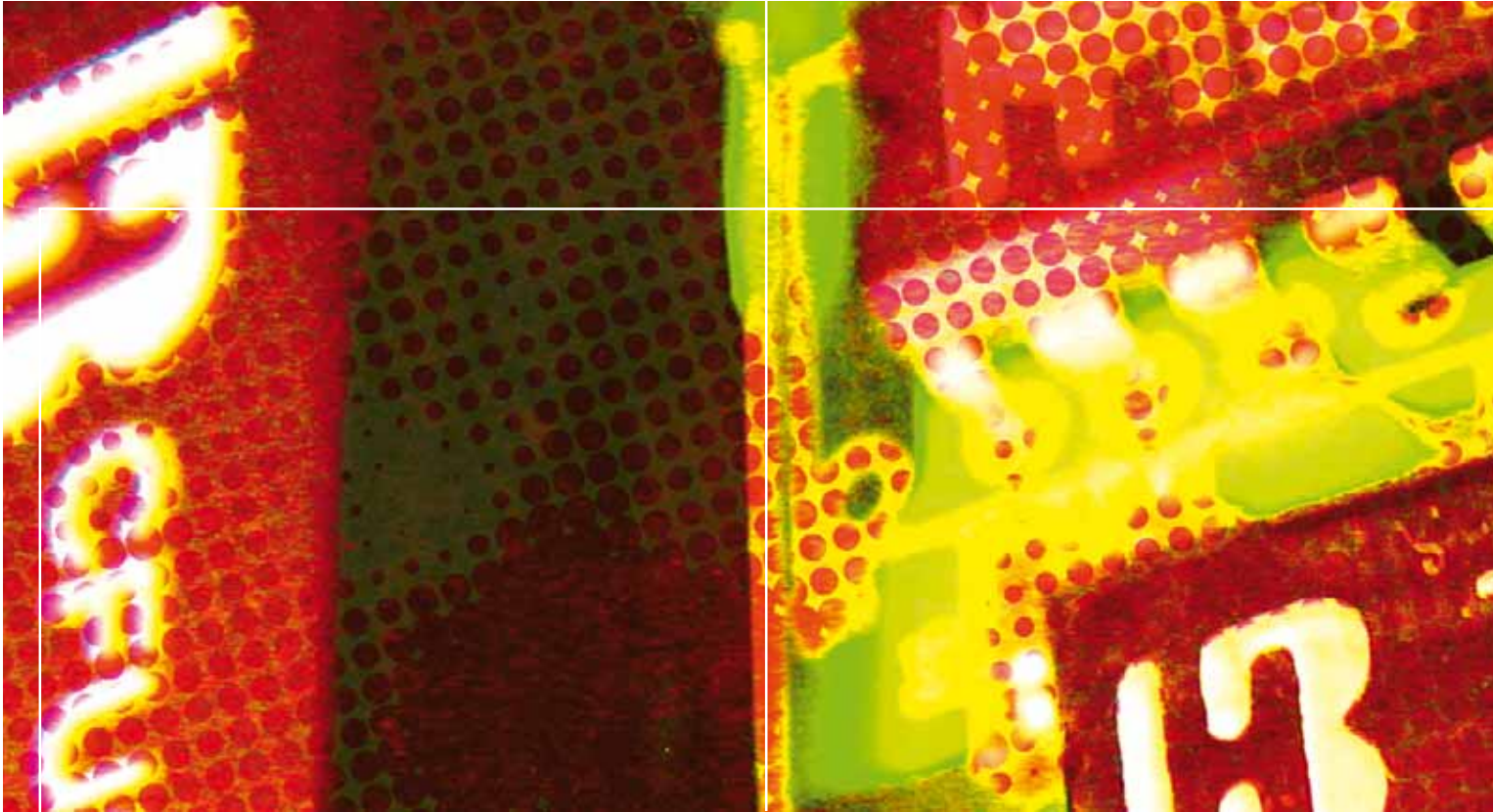
To enable the Commission to carry out its activities in an informed way, it constantly acquires information about the

market situation and rapid continuous technological development. In 2008, the Commission therefore also met various industry representations and visited the Ecole Polytechnique Fédérale de Lausanne (EPFL).

The Commission has its own secretariat, which is responsible for co-ordinating affairs, organising the activities of the Commission and providing the public with information.

In 2008 the Commission consisted of the following members:

- **Marc Furrer, President**, Attorney and notary
- **Christian Bovet, Deputy President**, Dr. iur., Professor of Law at the University of Geneva
- **Andreas Bühlmann**, Dr. rer. pol., Head of Finance, Canton Solothurn
- **Monica Duca Widmer**, Dr., dipl. Chem. Ing. ETH, entrepreneur with SME in the environment sector
- **Reiner Eichenberger**, Dr. oec. publ., Professor of Economics at the University of Fribourg
- **Jean-Pierre Hubaux**, electrical engineer, Prof. EPFL, Lausanne
- **Stephan Netzle**, Dr. iur., LL.M., Attorney



## Activities of the Commission

The most important tasks of ComCom, as the national regulatory authority for the telecoms sector, are:

- granting radio licences for use of the frequency spectrum,
- awarding the universal service licence,
- laying down the access conditions and prices when service providers fail to reach an agreement,
- approving the national numbering plans,
- fixing the terms of application for number portability and carrier selection,
- taking measures and sanctions in the event of violation of the applicable law and, where appropriate, revoking the licence.

The Commission takes its decisions independently and in particular is not subject to directives from the Federal Council or the Department.

The purpose of the Telecommunications Act (art. 1 TCA) is to provide guidelines for the Commission's decisions: the objective is to reliably provide private individuals, businesses and the administration with a wide range of high-quality, affordable telecommunications services. In addition to the universal service which provides all of Switzerland with

telecommunications services, these goals are to be achieved by means of effective competition.

It is therefore the task of ComCom, in close cooperation with OFCOM, to ensure compliance with the universal service and to promote competition in the telecoms market.

The following sections provide an overview of ComCom's activities in 2008.

### Access procedures

Since April 2007, the law (art. 11 TCA) has provided for the following access variants to the infrastructure and services of a market-dominant provider:

1. Full unbundling of the local loop
2. Bitstream access (for four years)
3. Billing for fixed network subscriber connections
4. Interconnection
5. Leased lines
6. Access to cable ducts, in so far as these have sufficient capacity

Following negotiations between players in the market which proved wholly or partially unsuccessful, since summer 2007 five companies have submitted a total of 14 applications for determination of access prices and conditions. OFCOM was





instructed to carry out a preliminary examination of access procedures, which include all the above access variants in different combinations.

Prior to ComCom's decisions, individual companies had already concluded access agreements with Swisscom and were accordingly able to unbundle connections or bill their own customers as early as 2007. However, in various cases, agreement between the parties was subject to a reservation concerning the prices and contract conditions to be laid down by ComCom.

After two initial decisions in the previous year, in 2008 ComCom took a final or interim decision on nine procedures relating to new forms of access. In addition, it was possible to conclude four interconnection procedures which had been pending for even longer. Five procedures relating to the co-use of Swisscom cable ducts, subloop unbundling and leased line prices are still in progress. In view of the number and complexity of the procedures, in the reporting year the authorities came up against resource limits. Nevertheless, OFCOM and ComCom are doing their utmost to conclude the procedures as rapidly as possible.

### **Bitstream Access**

Parliament explicitly included bitstream access as an access

variant in the TCA. However, in March 2007, Swisscom was not prepared to submit an offering, as it assumed that it was not dominant in the market in this case.

In November 2007, as part of an access procedure initiated by Sunrise, ComCom found that Swisscom was market-dominant with regard to bitstream access. Swisscom appealed against this interim decision.

The Federal Administrative Court, as the sole appeal authority, rejected this appeal in February 2009, thereby upholding ComCom's decision. Swisscom is therefore dominant in the bitstream access market and must propose a basic offering. If Sunrise or other providers dispute Swisscom's offering, ComCom would be obliged to set the prices.

### **Full unbundling and co-location**

In September 2008 ComCom set the price for full unbundling of the local loop for the first time. For 2007 Swisscom initially charged a monthly rental of CHF 31.00 for access to the local loop. In March 2008 Swisscom voluntarily reduced unbundling prices - with retroactive effect from 1 January 2008 - to CHF 23.50. ComCom examined whether this price was cost-based in accordance with the legal provisions within the framework of several procedures.

The cost analysis showed that Swisscom had assumed excessive capital charges, some too foreshortened amortisation periods and inflated construction and operating costs. ComCom therefore reduced the monthly price for unbundling of a house connection to CHF 18.18 for the year 2008 and CHF 16.92 for 2007. This means that the price of unbundling is only slightly above the European average.

In addition to this monthly line rental, a series of one-off prices – e.g. the line connection charge – were significantly reduced.

An examination of the relevant costs was undertaken on the basis of a cost model developed by Swisscom, which was made available to the authorities for the first time. With the aid of this software, which enables parameters to be quantified, the necessary adjustments could be made and the prices calculated.

The question of market dominance was not disputed for these procedures, so the Competition Commission (ComCo) did not have to be consulted. However, recommendations from the price monitoring office were taken into consideration for the decision. The holding of arbitration negotiations was waived, as the parties were not prepared to negotiate.

### **Co-location**

To enable Swisscom's competitors to unbundle subscriber lines, i.e. to operate them themselves, they must be able to obtain access to Swisscom's local exchanges and install their equipment in them. This process of installing and operating equipment in Swisscom's exchanges is known as "co-location". Here too, ComCom has reduced prices considerably. In particular, the one-off prices for Swisscom's clarifications and implementation services were reduced by 50 to 80%.

### **Third-party effect thanks to ban on discrimination**

The decreed prices apply to all providers, i.e. even to those who did not appeal (the so-called third-party effect). This entitlement exists in law on the basis of the ban on discrimination and does not need to be agreed contractually.

### **Prices are legally enforceable**

Though Swisscom has lodged appeals against various inter-

connection conditions, it has accepted the prices decreed by ComCom. Thus in 2008, for the first time in a current year, there was legal security with regard to the effective prices.

Full knowledge of the unbundling price level and general conditions has given operators a clear starting point which allows them to better plan their investments. The lower unbundling prices also lower the barriers to entry into the market for new operators. Unbundling enables providers to define their offerings freely and to achieve an exclusive relationship with customers. Customers in turn benefit from a wider range of products at low prices.

### **Subscriber line billing**

ComCom has reduced the wholesale price which alternative providers pay for "subscriber line billing" ("Verrechnung des Teilnehmeranschlusses" – VTA) for the years 2007 and 2008. Swisscom had granted alternative providers a reduction of 2% on connection charges. ComCom has now fixed a deduction of CHF 1.63. In the case of an analogue telephone connection, this corresponds to a reduction of 7%, or 4% for an ISDN connection.

### **What does "subscriber line billing" mean?**

Since April 2007 it has been possible, by means of "subscriber line billing", for customers who make all calls on the fixed network via an alternative provider (carrier preselection) to receive a single bill from their provider. Consequently, end-customers no longer have to pay Swisscom CHF 25.25 per month (including VAT) for the line.

In return, Swisscom receives payment from the alternative provider for the operation and maintenance of the fixed-network connection which it continues to provide.

### **Price calculation using the "retail minus" approach**

Swisscom is obliged to offer this access variant (in accordance with art. 11 of the Telecommunications Act) at cost-based prices. A report by the Competition Commission also came to this conclusion as part of the procedure.

The Ordinance on Telecommunications Services (art. 60, para. 2) prescribes the application of the so-called "retail minus" approach when determining prices for subscriber line



billing. Starting from the connection price which Swisscom charges end-customers for the fixed-network connection, costs which are saved as a result of billing by a different provider are deducted. Any new costs which are incurred in relation to subscriber line billing are added on.

### Interconnection prices 2007–2008

In the course of 2008, ComCom was able to conclude all five pending interconnection procedures and to set interconnection prices for 2007 and 2008. As in the previous year, with regard to interconnection prices Swisscom accepted the officially decreed prices. It has, however, lodged appeals relating to the third-party effect and individual supplementary services.

In relation to interconnection, ComCom was therefore also able to set legally enforceable prices during a current year for the first time.

#### How is an access procedure carried out?

The primacy of negotiations is laid down in the LTC. Before the Commission can decide on the prices and conditions for interconnection or access, the providers must first attempt to reach an agreement via negotiations. If no access agreement can be reached within three months, the provider may lodge a request with the Commission for an access decision to be taken.

The matter is then investigated by OFCOM. When there is a question as to whether one provider occupies a dominant position in the market, it is necessary to consult the Competition Commission (ComCo). Before ComCom lays down access/interconnection prices and conditions, the parties to the procedure have another chance to reach an amicable agreement within the framework of conciliation negotiations (cf. LTC Art. 11a and DTS Art. 64-74).

This procedure is also known as “ex-post regulation”. In contrast, “ex-ante regulation”, which does not recognise the primacy of negotiation, is practised in the EU. The regulatory authorities in the EU countries can intervene independently and at an early stage in markets in which competition is not effective.

In the case of the interconnection prices too, OFCOM analysed the extensive supporting evidence and heard the parties. The question of market dominance by Swisscom was only disputed in relation to individual services. The Competition Commission was consulted and ComCo came to the conclusion that Swisscom was market-dominant with regard to all services. Furthermore, a recommendation from the price monitoring office was also taken into consideration.

The subject matter of the procedures included both the interconnection rates for usage-dependent services (usage charges for termination and origination) and those for usage-independent services (non usage charges), which are essential for physical interconnection (e.g. setting up carrier selection or implementing new blocks of numbers).

For the years 2007 and 2008, as in the case of unbundling prices, Swisscom provided OFCOM with its cost model for the first time, so that it was possible to check the actual model costs in detail.

Examination of the Swisscom LRIC cost model has shown that ComCom had to make a number of adjustments to the model with regard to compliance with the legal requirements. Thus in the interconnection procedures, Swisscom again assumed in some cases too short service lifetimes and excessive operating costs. ComCom had already implemented a large part of the adjustments which have now been reaffirmed in its decision on the similar procedures on 14.12.2007 – in relation to interconnection no model parameters had to be adjusted. Furthermore, the overhead costs and the weighted average costs of capital were too high.

For these reasons ComCom reduced most interconnection prices by 25 to 30% compared with the prices published by Swisscom. This means that interconnection prices in Switzerland are now among the lowest in Europe.

Within this framework, ComCom also examined prices for number porting in the fixed network and decided on a reduction, from about CHF 17 to CHF 13.05 for 2007 and CHF 13.12 for 2008.

## The LRIC price calculation method

Article 11 of the Telecommunications Act (TCA) states that a market-dominant provider must among other things provide fully unbundled access to the local loop (including co-location) and interconnection at cost-based prices. These prices are based on the costs which an efficient provider would incur if it had to provide access to the infrastructure itself under competitive conditions. The legal provisions do not therefore allow historic costs to be used when valuing the network. For the price calculations, the tried-and-tested "LRIC" method (Long Run Incremental Cost) is used, as stipulated in the Telecommunication Services Ordinance (art. 54).

The LRIC method leads to fair prices which promote competition, in that competitors of the market-dominant provider only have to bear the costs actually attributable to the services in question.

This method of calculation also takes into account, in addition to the costs related to interconnection, a portion of overhead costs and the capital costs which are customary in the industry. The capital costs include both the costs for external capital and the expected return on internal capital resources (equity capital). Therefore the LRIC prices also include a profit element. Further information on the LRIC method can be found on the ComCom website: [www.comcom.admin.ch](http://www.comcom.admin.ch) (press release of 24.09.2008).

## What is the universal service?

The universal service consists of a basic offering of telecommunications services which, according to the Telecommunications Act (TCA of 30.4.1997), must be provided nationally to all sectors of the population, in good quality and at a reasonable price. The universal service therefore ensures from the outset that any possible regional or social disadvantage does not prevent access to the most fundamental means of social communication.

It is within the remit of the Federal Council to adapt the content of the universal service periodically to social and economic needs as well as to technological developments. ComCom is obliged by the TCA to periodically put the licence for universal service in telecommunications out to tender and to award it on the basis of a competition based on criteria.

The universal service includes the public telephone service and the right to a fixed-network connection, and now it also includes a broadband internet connection. In addition, adequate coverage by telephone boxes and access to emergency call services and subscriber directories must be guaranteed. To facilitate communication for the hearing-impaired and visually-impaired, there are additional special services (such as a transcription service and switching services).

## Licences

In accordance with the Telecommunications Act (TCA), ComCom awards radio and universal service licences.

However, ComCom has delegated to OFCOM the task of awarding radio communication licences for telecommunication services which are not subject to a tender procedure (for example, licences for radio amateurs or company radio) and licences which are intended to be fully used for the transmission of radio and television programme services.

Below you will find an overview over the licences issued by ComCom.

## Universal service

Providing the population with a high-quality, reasonably-priced basic offering of telecommunications services is fully guaranteed everywhere in Switzerland.

The Federal Council has defined quality criteria for the different elements of the universal service (art. 21 OTS). OFCOM regularly checks the quality of the universal service. For the year 2008, it again came to the conclusion that the quality criteria are being met.

Since the beginning of 2008, the universal service has also included a broadband connection with a transmission rate of 600/100 kbit/s. This is unique worldwide; since then, there have also been endeavours in this direction by other countries.

As the universal service licensee for 2008–2017, Swisscom now offers a broadband connection to those households which were previously unable to make use of an ADSL offering for technical reasons. However, the universal service does not specify the technology to be used to provide this service. This enables Swisscom to provide the broadband connection via satellite or via a mobile radio solution.

As of the end of 2008, the universal service also includes a total of 4863 public telephone kiosks. In 2008, ComCom in seven cases approved the removal of one call-box respectively, as applied for by Swisscom and the municipality concerned. There remains at least one public call-box in all these municipalities. In Switzerland, outside the universal service, there are some 3500 other public telephones in profitable locations.

### **GSM licences**

At the beginning of 2008, there were five GSM licences in use in the Swiss mobile radio market and all the network operators were in compliance with their GSM licence and the prescribed coverage conditions.

GSM mobile telephony coverage in Switzerland is nearly 100% of the population and 90% of the national surface area.

A few years ago, to speed up data transmission rates, the operators installed a further development of the GSM standard on their GSM networks. The Sunrise and Swisscom networks are equipped with EDGE nation-wide. This allows data transfer at approximately 200 kbit/s. In the Orange GSM network GPRS is installed, allowing data transmission rates of about 50 kbit/s.

### **Extension of three GSM licences**

In 2007, ComCom took a decision in principle to renew the GSM licences of Orange, Sunrise and Swisscom which have expired at the end of May 2008, for approximately 5 years. The objective was to achieve chronological harmonisation with the term of the Tele2 and In&Phone GSM licences, which expire at the end of 2013. Finally, it was envisaged to adapt the licences to technological advances and to enable UMTS systems to operate in the former GSM frequency

bands. To achieve this, a minor reallocation of the currently allocated frequencies would have been necessary.

However, a licensee which was not directly affected submitted an objection to this licence renewal to the Federal Administrative Court, thereby blocking the planned procedure. In order to ensure mobile telephone coverage in Switzerland after the GSM licences expire, ComCom has provisionally extended the GSM mobile telephony licences of Orange, Sunrise and Swisscom until 31 December 2013 at the latest.

Following the decisions of the Federal Administrative Court regarding all outstanding appeals, ComCom will determine how to proceed. The provisionally extended licences should be replaced as quickly as possible by new licences which take better account of technological developments.

### **Return of the Tele2 GSM licence**

Sunrise took over the Swiss telecommunications provider Tele2 in the autumn of 2008. The two companies informed ComCom that Tele2 would surrender its GSM licence. In order to guarantee reliable provision for the approx. 100,000 Tele2 mobile customers in the take-over phase, ComCom allowed Tele2 to continue to use its GSM frequencies until the end of 2008 at the latest. Tele2 finally returned its GSM licence at the end of November 2008.

### **UMTS licences**

Three UMTS licences are in use in Switzerland and here too all three licence holders complied with their licences. Population coverage for UMTS services is between 60% and 92%, depending on the provider. About 60% of the surface area of the country now has UMTS coverage.

In the last few years all three operators have invested in the UMTS expansion HSDPA, laying the foundations for mobile surfing at transmission speeds of 1.8 Mbit/s or even 3.6 Mbit/s. Both Swisscom, with the largest UMTS coverage, and Orange and Sunrise have already equipped large parts of their network with HSDPA. HSDPA is therefore available in most medium-sized and all large Swiss towns and cities.

As fast mobile internet access is complemented by more and more flat-rate offerings which allow unlimited data

transmission, substitution of the fixed network connection by a broadband mobile radio connection will become more attractive for mobile sectors of the population.

Notwithstanding higher transmission rates in mobile radio, it must be assumed that most households will still need even higher performance fixed-network connections, based on optical fibre, in the future. Only in this way can the widely differing, simultaneous needs for communication, information and entertainment within the family be met.

In 2007 1,5 millions mobile telephone users were using a UMTS network. The number of customers using UMTS continued to increase sharply in 2008.

### **Consultation on the use of free UMTS frequencies**

Since ComCom revoked the UMTS licence from 3G Mobile AG (Telefonica) in April 2006, a bandwidth of up to 35 MHz is unused in the UMTS core band (the 2 GHz frequency band). In addition, a bandwidth of a further 190 MHz has been available in Europe since 2008 for the provision of mobile broadband services in the so-called UMTS expansion band (2.5 GHz).

With a view to a possible tender procedure for free frequencies, OFCOM carried out a public consultation to clarify requirements on behalf of ComCom. In June 2008, OFCOM published the results of the consultation, in which 18 respondents participated (see also [www.comcom.admin.ch](http://www.comcom.admin.ch), "Latest News/Consultations").

The chances of an additional mobile radio operator, which would have to construct a regional or national UMTS network, were deemed by most respondents to be low. Reasons cited included stringent approval procedures and the population's resistance to new antenna sites. Under these specific Swiss conditions, it would be difficult for a new provider without an existing customer base to amortise the high investment.

Only the existing network operators showed medium-term interest in the frequencies in the UMTS core band. These might be needed if capacity bottlenecks were to occur in the future in conurbations.

At present, there is still little interest in the frequencies in the UMTS expansion band. Such a requirement is expected only in a few years' time, in connection with future fourth-generation mobile radio systems. The public consultation therefore indicated no immediate need to take action.

### **Future new allocation of mobile radio frequencies**

In addition to the above-mentioned currently unused mobile radio frequencies, in the case of GSM all licences will expire at the end of 2013, or at the end of 2016 in the case of UMTS. Moreover, from about 2014 onwards some frequencies in the 790-862 MHz sub-band, which are very attractive in technical terms, will become available for mobile radio services. The reason for this is termed the "digital dividend". This describes the circumstance that because of the switch-over from analogue to digital terrestrial broadcasting of TV programme services the entire UHF spectrum (470–862 MHz) will no longer be needed for broadcasting. However, this change-over must take place throughout Europe on a coordinated basis.

Because of this state of affairs ComCom undertook an overview of the allocation and future utilisation of the mobile radio frequencies available in the future as early as 2008.

From ComCom's viewpoint, the aim must be firstly to ensure first-class mobile radio provision in Switzerland and secondly to facilitate the use of the latest technology in each case. On the other hand, to enable consumers to benefit from cheaper and better-quality products, all opportunities for sustainable stimulation of competition in the mobile radio sector have to be examined.

### **BWA licences**

In the 3.41-3.6 GHz frequency range, Swisscom and Callix (formerly Inquam Broadband) each have a BWA licence with a frequency allocation of 2 x 21 MHz.

In 2008, ComCom approved an application from both companies to adapt the licence. Since delays had arisen due to certification of system components at international level, ComCom did not insist on compliance with the deadline for commencement of commercial operation. However, the obligation to operate at least 120 transmitter/receiver units by the end of 2009 (Swisscom) or 2010 (Callix) was not changed.



## WLL licences

In the case of the WLL licences, there were no changes in 2008. As the supervisory authority, OFCOM as a rule regularly checks whether the minimum operational obligations of the licences is being complied with. If this is not the case, OFCOM initiates a supervisory procedure which may lead to the licence being revoked.

## Licence for mobile TV

Within the framework of a competition based on criteria, the ComCom awarded the first national DVB-H licence to Swisscom Broadcast. Swisscom Broadcast rapidly constructed the network and complied with the obligation to be able to offer 44% of the population a mobile TV service by the end of May 2008.

Since May 2008, Swisscom has been the only mobile operator to offer mobile TV based on DVB-H technology. Swisscom's mobile radio customers have the option of taking out a daily or monthly subscription and accessing 20 TV channels; since autumn 2008 Swisscom is offering a number of additional channels. According to Swisscom, in September 2008 a total of 50,000 people were using the "Bluewin TV mobile" product – though only those customers with a special DVB-H handset are able to enjoy the good picture quality offered by this broadcasting technology.

## Number porting

Since the year 2000, it has been possible for customers to transfer their telephone number to a new network operator. In recent years, between 100,000 and 150,000 customers have switched mobile radio operators. This represents an annual switching rate of 1,5 – 2% of mobile telephone numbers.

In the fixed network too, number porting takes place only in the case of a switch between operators with their own access network (e.g. in the case of a switch from Swisscom to Cablecom and vice versa). Here too, in recent years only 1,5 – 2% of customers have switched.

Last autumn, ComCom reduced the wholesale price for porting a fixed-network number from CHF 17.36 to CHF 13.05 for 2007 and to CHF 13.12 for 2008.

## Carrier Selection

Carrier selection, whether call-by-call or automatically for every call (carrier preselection) has been an important instrument for promoting competition since the outset of liberalisation. This freedom of choice was introduced in Switzerland in 1999 and has been operating since then without any problems. However, the number of customers who have set up carrier preselection on their line has not increased since 2002, and the rate of decline has even increased. In 2006, approximately 27% of lines had preselection with an alternative provider; in 2007 the figure was only 23%. There are many reasons for this trend: telephony offerings from TV cable network operators, customers returning to Swisscom, the emergence of VoIP telephony and, not least, unbundling of lines.

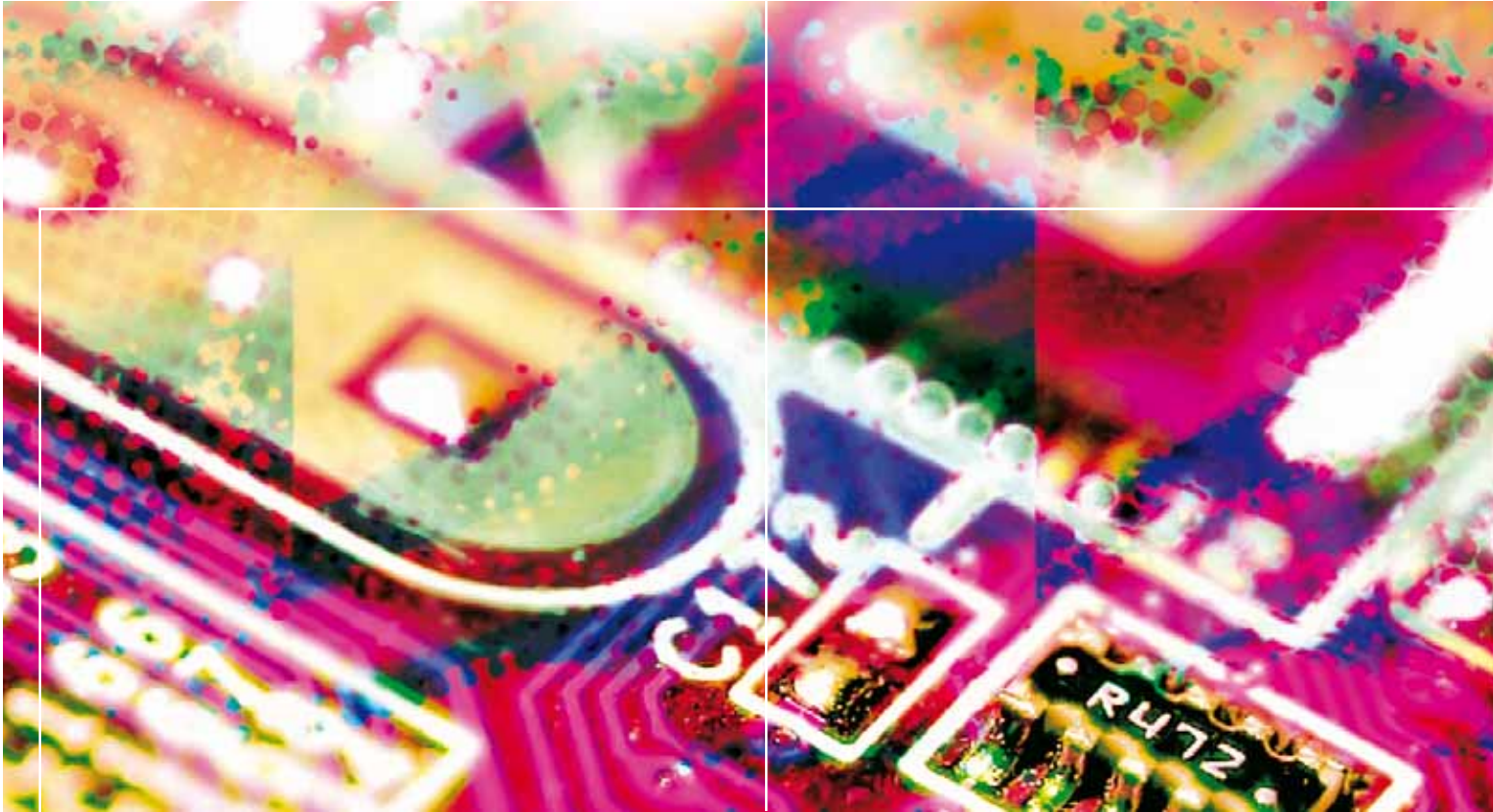
## Protection from abuses in relation to unwanted changes of the carrier preselection

In order to provide customers with better protection from an unwanted change of fixed-network provider, in 2007 the Commission amended the regulations for carrier preselection. In this context, complaints to the authorities fell in 2008.

Preselection applications made by telephone must be recorded. During this recording, the customer must not be influenced in any way and must expressly agree to the verbal conclusion of the contract.

From now on, preselection applications, made either in writing or by telephone, must include a description of the services offered, confirmation that the applicant is actually the subscriber of the connection, an authorisation empowering the provider to arrange preselection on the subscriber's connection and an indication to the customer of a period during which he can withdraw from the contract.

In the event of a dispute, the provider is obliged to present proof of the preselection application within 10 days, where applicable including the recording of the commercial conversation relating to the telephone canvassing.



## Finances

Unlike other commissions of the federal administration (e.g. the Competition Commission), ComCom is not associated with a secretariat which encompasses all essential technical services. ComCom merely maintains a secretariat consisting of three people which monitors activity, communicates with the public and deals with all administrative affairs.

However, under the TCA, ComCom is able to involve the Federal Office of Communications (OFCOM) in enforcing telecommunications law and to issue directives to it. In concrete terms, this means that OFCOM, with its specialist technical services, prepares the Commission's business and implements its decisions. In particular, OFCOM is also the initial examining authority with regard to access procedures.

However, in order to provide an overview of ComCom's revenue and expenditure, ComCom's expenditure is shown

together with OFCOM expenditure in the form of products. This also allows corresponding revenues to be shown.

The Commission's costs are covered by administration fees – according to the “causer pays” principle as far as possible. The award of radiocommunications licences by ComCom also gives rise to substantial annual, or in the case of auctions one-off revenues for the Federal Treasury, in the form of radiocommunications licence fees.

In 2008, ComCom's total costs including OFCOM's expenditure for the Commission amounted to CHF 3,47 million. This includes the expenditure of the Commission as a whole, with its secretariat, of CHF 983,000 in total.

In the case of costs related to the universal service, access procedures and the award of radiocommunications licences, the revenue-to-cost ratio is generally high. Unfortunately, it is often not possible to bill expenditure in the same year as the



one in which the costs were incurred, e.g. because of appeals or protracted procedures.

In 2007, the revenue-to-cost ratio, depending on the product group, was between 96 and 98%. In 2008, however, only 22% of costs were covered by administration fees, because of appeals against ComCom decisions.

In addition, there were unavoidable activities which cannot be offset against any specific procedure: this is the case, for example, for the elaboration of economic or legal foundations, international exchanges of experiences or market development studies.

The radiocommunications licences awarded by ComCom (GSM, UMTS, BWA) also generated approximately CHF 9,055,427 of licence fees for the Confederation in 2008.

**Costs, administration fees and coverage of costs of ComCom in 2008**  
**(including ComCom's secretariat and OFCOM's activities for ComCom)**

Product	Costs [in CHF]	Administration fees [in CHF]	Coverage of costs [in %]
General foundations	1'215'674	–	0
Universal service licence	377'078	202'600	54
Access procedures	1'364'413	563'135	41
Radiocommunications licences: tender procedure and award	452'517	–	0
Supervisory measures	58'726	8'310	14
<b><i>ComCom total (OFCOM, Commission and secretariat)</i></b>	<b><i>3'468'408</i></b>	<b><i>774'045</i></b>	<b><i>22</i></b>



## Abbreviations

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ADSL	Asymmetric Digital Subscriber Line
BWA	Broadband Wireless Access (WiMAX/WLL)
CATV	Cable Television
ComCom	Swiss Federal Communications Commission
CSC	Carrier Selection Code
DTS	Decree on Telecommunications Services (SR 784.101.1)
DVB-H	Digital Video Broadcasting for Handheld Terminals
EDGE	Enhanced Data rates for GSM Evolution
ERG	European Regulators Group
GPRS	General Packet Radio Services
GSM	Global System for Mobile Communications
HDTV	High-definition television
HSDPA	High Speed Downlink Packet Access
IC	Interconnection
IP	Internet Protocol
IPTV	Internet Protocol Television
ISDN	Integrated Services Digital Network
ISP	Internet Service Provider
LRIC	Long Run Incremental Costs
LRTV	Law on Radio and Television (SR 784.40)
LTC	Law on Telecommunications (SR 784.10)
MMS	Multimedia Messaging System
OFCOM	Swiss Federal Office of Communications
PSTN	Public Switched Telephone Network
SMS	Short Message System
UMTS	Universal Mobile Telecommunications System
VoD	Video on Demand
VoIP	Voice over IP
WiMAX	Worldwide Interoperability for Microwave Access (association of equipment and component manufacturers)
WLL	Wireless Local Loop

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